REMARKS

Status of the Claims

Claims 1-22, 25-29, 32, and 33 are pending, with claims 1, 25, and 32 being independent. Claims 1, 25, and 30 have been amended to even more clearly recite and distinctly claim the present invention. Support for the amendments may be found throughout the specification, including in the original claims and in the Figures. Therefore, no new matter has been added. Claims 23 and 24 have been canceled without prejudice to or disclaimer of the subject matter contained therein.

Figure 2 and the paragraphs discussing Figure 2 in the specification have been amended to make the labeling of Figure 2 consistent with that in Figure 1. Accordingly, no new matter has been added. Attached hereto is a corrected formal drawing of Figure 2 and a red-lined copy of Figure 2 showing the changes made.

Applicants initially would like to thank the Examiner for indicating that claims 32 and 33 are allowed.

Applicants respectfully request the Examiner to reconsider and withdraw the outstanding rejections in view of the foregoing amendments and following remarks.

Specification

The disclosure stands objected to because serial numbers are missing from the first paragraph of the specification. The first paragraph of the specification has been amended herein to include the missing serial numbers. Accordingly, Applicants respectfully request this objection be withdrawn.

Oath/Declaration

Applicants would like to thank the Examiner for the telephone message indicating that the executed declaration submitted in the present application contains sufficient information to properly identify the present application to which it pertains. In this regard, Applicants again note that the executed declaration properly identifies the names of the inventors, the title of the present application which was on the application as filed, and the attorney docket number which was on the application as filed. Accordingly, Applicants respectfully submit that the executed declaration complies with the identification requirement as set forth in 37 C.F.R. § 1.63 and MPEP 602.

Claim Rejection Under 35 U.S.C. § 112

Claim 24 stands rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Without conceding the propriety of the rejection, claim 24 has been canceled, thereby rendering this rejection moot.

Claim Rejections Under 35 U.S.C. § 102

Claims 1-18, 25, and 26 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 2,877,257 ("Cain"). Without conceding the propriety of the rejection, independent claims 1 and 25 have been amended as provided above.

Cain relates to a process for the purification of hydrocarbon solutions of oxygenated organic compounds comprising acids and which also may contain dissolved or occluded metal contaminants such as iron or iron compounds. (Col. 1, lines 15-19). Cain discloses that a crude hydrocarbon synthesis oil is washed with an aqueous acid solution and this washing step is repeated until no brown precipitate is produced on the addition of a suitable base to the acid extract. (Figure 2 and Col. 2, lines 19-25). Cain further discloses that the oil treated in this manner is then neutralized in a neutralization vessel with an aqueous caustic solution to produce an upper neutral oil layer containing dissolved chemicals. (Figure 2 and Col. 2, lines 36-38). Cain discloses that from the bottom of the neutralization vessel, a rich aqueous soap solution, free of iron and basic nitrogen compounds, is withdrawn. (Column 7, lines 40-60 and Fig. 2).

In contrast, the presently claimed method of independent claim 1 recites a method of removing contamination from a Fischer-Tropsch derived hydrocarbon stream. The method comprises passing a Fischer-Tropsch derived hydrocarbon stream to a treatment zone; passing an aqueous acidic stream to the treatment zone; and contacting the Fischer-Tropsch derived hydrocarbon stream with the aqueous acidic stream in the treatment zone to form a mixed stream. The mixed stream is separated into at least one acidic extracted Fischer-Tropsch derived hydrocarbon stream and at least one modified aqueous acidic stream. The at least one acidic extracted Fischer-Tropsch derived hydrocarbon stream is passed to a hydroprocessing reactor containing catalyst beds and the acidic extracted Fischer-Tropsch derived hydrocarbon stream is hydroprocessed to provide a hydroprocessed product stream, wherein the contacting step substantially reduces plugging of catalyst beds in the hydroprocessing reactor.

To anticipate a claimed invention under §102, a reference must teach each and every element of the claimed invention. *See Lindeman Machinenfabrik GmbH v. American Hoist and Derrick Company*, 221 USPQ 481, 485 (Fed. Cir. 1984). It is respectfully submitted that in no way does Cain disclose or suggest the presently claimed process of claim 1. As described above, Cain discloses neutralizing the acid washed oil in a neutralization vessel with an aqueous caustic solution to produce an upper neutral oil layer containing dissolved chemicals. Accordingly, in no way does Cain disclose or suggest passing the at least one ***acidic extracted Fischer-Tropsch derived hydrocarbon stream*** to a hydroprocessing reactor containing catalyst beds and hydroprocessing the ***acidic extracted Fischer-Tropsch derived hydrocarbon stream*** to provide a hydroprocessed product stream, wherein ***the contacting step substantially reduces plugging of catalyst beds in the hydroprocessing reactor***.

As Cain does not disclose each and every element of the claims, it cannot anticipate the presently claimed invention of claim 1 or claims dependent thereon. Accordingly, withdrawal of the rejection under 35 U.S.C. § 102(b) is respectfully requested.

With regard to independent claim 25, the presently claimed method of independent claim 25 recites a method of removing contamination from a Fischer-Tropsch derived hydrocarbon stream. The method comprises passing a Fischer-Tropsch derived hydrocarbon stream to a treatment zone; passing an aqueous acidic stream to the treatment zone; and extracting contamination from the Fischer-Tropsch derived hydrocarbon stream by contacting the Fischer-Tropsch derived hydrocarbon stream with the aqueous acidic stream in the treatment zone at extraction conditions to form a mixed stream. At least one acidic extracted Fischer-Tropsch derived hydrocarbon stream is separated from a modified aqueous acidic stream and a third phase, wherein after the extraction step the contamination contained in the modified aqueous acidic stream and the third phase is greater than the contamination contained in the extracted Fischer-Tropsch derived hydrocarbon stream.

As disclosed in the present application, a third phase may form during extraction of the Fischer-Tropsch derived hydrocarbon stream with an aqueous acidic stream. The third phase is substantially distinct from the extracted Fischer-Tropsch derived hydrocarbon stream and the modified aqueous acidic stream. Contamination from the Fischer-Tropsch derived hydrocarbon stream may be concentrated into this third phase, and thus, the third phase can

contain high levels of metals, often as high as 10 times the level of metals found in the treated Fischer-Tropsch product stream. (Page 9, Lines 17-27).

To anticipate a claimed invention under §102, a reference must teach each and every element of the claimed invention. *See Lindeman Machinenfabrik GmbH v. American Hoist and Derrick Company*, 221 USPQ 481, 485 (Fed. Cir. 1984). It is respectfully submitted that in no way does Cain disclose or suggest the presently claimed process of claim 25. As described above, Cain discloses washing a crude hydrocarbon synthesis oil with an aqueous acid solution and then neutralizing the acid washed oil in a neutralization vessel with an aqueous caustic solution to produce an upper neutral oil layer containing dissolved chemicals and a bottoms layer, which is a rich aqueous soap solution, ***free of iron and basic nitrogen compounds***. Accordingly, the soap layer is not produced from the acid wash; rather, it is produced from the neutralization of the acid washed oil with an aqueous caustic solution. In addition, Cain discloses that this rich aqueous soap solution is ***free of iron and basic nitrogen compounds***. Accordingly, in no way does Cain disclose or suggest the presently claimed method comprising passing a Fischer-Tropsch derived hydrocarbon stream to a treatment zone; passing an aqueous acidic stream to the treatment zone; extracting contamination from the Fischer-Tropsch derived hydrocarbon stream by contacting the Fischer-Tropsch derived hydrocarbon stream with the aqueous acidic stream in the treatment zone at extraction conditions to form a mixed stream; and separating at least one acidic extracted Fischer-Tropsch derived hydrocarbon stream from a modified aqueous acidic stream and ***a third phase***, wherein after the extraction step ***the contamination contained in the modified aqueous acidic stream and the third phase is greater than the contamination contained in the extracted Fischer-Tropsch derived hydrocarbon stream.***

As Cain does not disclose each and every element of the claims, it cannot anticipate the presently claimed invention of claim 25 or claims dependent thereon. Accordingly, withdrawal of the rejection under 35 U.S.C. § 102(b) is respectfully requested.

Claim Rejections Under 35 U.S.C. § 103

Claim 27 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Cain. Applicants respectfully disagree with the rejection; therefore, this rejection is respectfully traversed.

As described above, Cain relates to a process for the purification of hydrocarbon solutions of oxygenated organic compounds comprising acids and which also may contain dissolved or occluded metal contaminants such as iron or iron compounds. (Col. 1, lines 15-19).

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP § 2143.

Claim 27 depends on independent claim 25 and further limits claim 25 by specifying the extraction conditions. As described above, in no way does Cain disclose or suggest the presently claimed process of claim 25 or claims dependent thereon. Cain discloses washing a crude hydrocarbon synthesis oil with an aqueous acid solution and then neutralizing the acid washed oil in a neutralization vessel with an aqueous caustic solution to produce an upper neutral oil layer containing dissolved chemicals and a bottoms layer, which is a rich aqueous soap solution, ***free of iron and basic nitrogen compounds***. Accordingly, the soap layer is not produced from the acid wash; rather, it is produced from the neutralization of the acid washed oil with an aqueous caustic solution. In addition, Cain discloses that this rich aqueous soap solution is ***free of iron and basic nitrogen compounds***.

Accordingly, in no way does Cain disclose or suggest the presently claimed method of claim 25 comprising passing a Fischer-Tropsch derived hydrocarbon stream to a treatment zone; passing an aqueous acidic stream to the treatment zone; extracting contamination from the Fischer-Tropsch derived hydrocarbon stream by contacting the Fischer-Tropsch derived hydrocarbon stream with the aqueous acidic stream in the treatment zone at extraction conditions to form a mixed stream; and separating at least one acidic extracted Fischer-Tropsch derived hydrocarbon stream from a modified aqueous acidic stream and ***a third phase***, wherein after the extraction step ***the contamination contained in the modified aqueous acidic stream and the third phase is greater than the contamination contained in the extracted Fischer-Tropsch derived hydrocarbon stream***. Moreover, in no way does Cain disclose or suggest the presently claimed method using the extraction conditions as recited in claim 27.

Accordingly, for at least the above described reasons, withdrawal of this rejection under 35 U.S.C. § 103(a) is respectfully requested.

Claims 19, 20, 22, 28, and 29 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Cain in view of U.S. Patent No. 6,476,086 ("Zhou"). Applicants respectfully disagree with the rejection; therefore, this rejection is respectfully traversed.

As described above, Cain relates to a process for the purification of hydrocarbon solutions of oxygenated organic compounds comprising acids and which also may contain dissolved or occluded metal contaminants such as iron or iron compounds. (Col. 1, lines 15-19).

Zhou relates to a method for separating iron-based catalyst fines from hydrocarbon liquid/wax/catalyst slurry for Fischer-Tropsch synthesis processes by contacting and/or mixing the slurry with a coalescence enhancing treating solution to facilitate gravity separation and settling of such catalyst, and thereby yield a substantially clean hydrocarbon liquid/wax product. Zhou discloses that the treating solution includes a surface tension reducing agent, an agglutinating agent, and a coalescing agent, each in selected proportions in aqueous solution.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP § 2143.

Applicants respectfully submit that there is no suggestion or motivation, either in Cain or Zhou, to combine the teachings. Cain and Zhou both relate to significantly different methods for removing contaminants from hydrocarbon products. These methods are stated to be effective means for removing contaminants. Therefore, there is no suggestion or motivation to combine the different methods for removing contaminants of Cain and Zhou when they are stated to be effective independently.

In addition, Applicants respectfully submit that even if there were some suggestion or motivation to combine Cain and Zhou and a reasonable expectation of success, Cain and Zhou, even when combined, do not disclose or suggest all the claim limitations of claims 19,

20, 22, 28, and 29. As described above in detail with regard to independent claims 1 and 25, the presently claimed methods are significantly different than the process of Cain. In addition, the presently claimed methods are significantly different than the coalescence enhanced gravity separation of Zhou. As cited, Zhou fails to cure the many, above-noted deficiencies with respect to Cain. Accordingly, even if combined Cain and Zhou do not disclose or suggest the presently claimed processes of claims 19, 20, 22, 28, and 29.

Therefore, for at least the above described reasons, withdrawal of this rejection under 35 U.S.C. § 103(a) is respectfully requested.

Claims 21, 23, 24, 30, and 31 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Cain in view of U.S. Patent No. 5,378,348 ("Davis"). Applicants respectfully disagree with the rejection; therefore, this rejection is respectfully traversed.

As described above, Cain relates to a process for the purification of hydrocarbon solutions of oxygenated organic compounds comprising acids and which also may contain dissolved or occluded metal contaminants such as iron or iron compounds. (Col. 1, lines 15-19).

Davis relates to distillate fuels with excellent cold flow properties produced from waxy Fischer-Tropsch products by separating the product into a heavier and a lighter fraction, isomerizing the heavier fraction, hydrotreating and isomerizing the lighter fraction, and recovering products in jet and diesel fuel ranges.

Applicants respectfully submit that even if there were some suggestion or motivation to combine Cain and Davis and a reasonable expectation of success, Cain and Davis, even when combined, do not disclose or suggest all the claim limitations of claims 21, 23, 24, 30, and 31. As described above in detail with regard to independent claims 1 and 25, the presently claimed methods are significantly different than the process of Cain. As cited, Davis fails to cure the many, above-noted deficiencies with respect to Cain. Accordingly, even if combined Cain and Davis do not disclose or suggest the presently claimed processes of claims 21, 23, 24, 30, and 31.

Therefore, for at least the above described reasons, withdrawal of this rejection under 35 U.S.C. § 103(a) is respectfully requested.

Conclusion

Without conceding the propriety of the rejections, the claims have been amended, as provided above, to even more clearly recite and distinctly claim Applicants' invention and to pursue an early allowance. For the reasons noted above, the art of record does not disclose or suggest the inventive concept of the present invention as defined by the claims.

In view of the foregoing remarks, reconsideration of the claims and allowance of the subject application is earnestly solicited. In the event that there are any questions relating to this application, it would be appreciated if the Examiner would telephone the undersigned attorney concerning such questions so that prosecution of this application may be expedited.

In the event any further fees are due to maintain pendency of this application, the Examiner is authorized to charge such fees to Deposit Account No. 02-4800.

Respectfully submitted,

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Attachments: Replacement Sheet
Annotated Sheet Showing Changes

AMENDMENTS TO THE DRAWINGS

Figure 2 is amended herein to make the labeling of Figure 2 consistent with that in Figure 1. Attached is a corrected formal drawing of Figure 2 and a red-lined copy of Figure 2 showing the changes made.

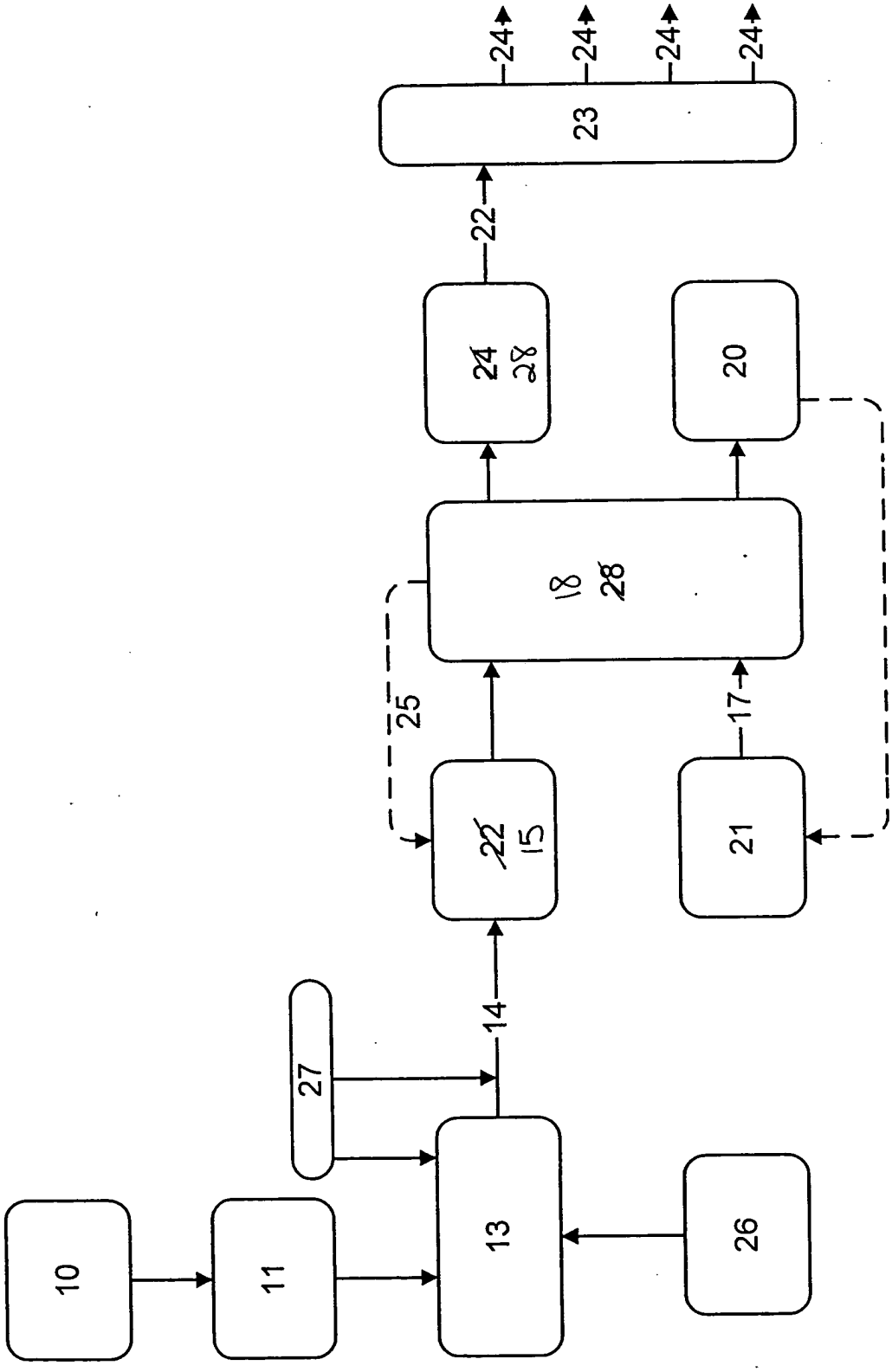

Fig. 2